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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/887,659 | 04/24/2001 | Keiichi Ikeda | 1232-4349US1 | 4826 |

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MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

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| EXAMINER |
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HANNETT, JAMES M

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| ART UNIT | PAPER NUMBER |
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2612

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 09/887,659 | Applicant(s) IKEDA ET AL. | |
| | Examiner James M. Hannett | Art Unit 2612 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 and 36-41 is/are pending in the application.
- 4a) Of the above claim(s) 9-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 6-8 and 36-41 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Claims 1-8 and 36-40 in the reply filed on 12/29/2004 is acknowledged. The traversal is on the ground(s) that undue diverse search should not be required. This is not found persuasive because The examiner views the search that would be required to properly address all of the limitations in groups I, II, and III as being a serious burden to the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claims 9-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Groups II and III, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/29/2004.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: An image sensing system in which an exchangeable camera head informs a remote image processing unit as to the type of camera head currently attached to the image sensing system.

Claim Objections

Claim 1 is objected to because of the following informalities: line 3 reads "an abject" This should be amended to read "an object". Appropriate correction is required.

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1: Claims 1, 6, 8, 36-41 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 6,295,082 Dowdy et al.

2: As for Claim 1, Dowdy et al depicts in Figure 1 and 2 and teaches on Column 3, Lines 23-32 and Column 4, Lines 11-25 an image sensing apparatus (12) connected to an external image processing apparatus (14) comprising: image sensing circuit (18) for sensing an object and outputting an image signal; communication circuit (serial data link) for transmitting the image signal and identification information on the image sensing circuit (NVS data). Dowdy et al teaches on Column 4, Lines 60-67 and Column 5, Lines 9-30 a control circuit (48) for controlling the image sensing circuit (18) and a communication mode of the communication circuit in accordance with drive signals (50), transmitted from the image processing apparatus (14). Dowdy et al teaches that the MPU controller can allow either that image data or camera information data from the NVS memory to be transmitted over the serial data link. This process is viewed by the examiner as controlling a communications mode. Dowdy et al teaches on Column 5, Lines 17-25 that the controller (MPU) reads the stored camera information out of the NVS memory through a serial data link. Dowdy et al teaches that in order to prevent any interference with the electrical signals produced by the CCD, the controller reads the information from the NVS memory during the video blanking and vertical retrace times of the CCD.

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Therefore, the camera produces image signals in accordance with the transmitted drive signals transmitted from the controller (48) and driver (50). Furthermore, the communication circuitry produces a vertical blanking period and vertical retrace in which no image data is being transmitted and allows the camera information stored in the NVS memory to be transmitted during this (muted time). Therefore, the communication circuit mutes the image signal (creates a vertical blanking period or vertical retrace period) while predetermined communication (transmission of NVS data) between the image sensing apparatus (12) and the external image processing apparatus (14) is carried out in synchronism with a predetermined synchronous camera control signal (camera drive signals).

3: In regards to Claim 6, Dowdy et al teaches on Column 5, Lines 23-26 the communications circuit communicates in a vertical interval data signal method.

4: In regards to Claim 8, Dowdy et al teaches on Column 2, Lines 34-38 at least an amount of information is changed in accordance with the communication mode. Dowdy et al teaches the image conversion will be changed based on the information obtained from the NVS memory.

5: As for Claim 36, Dowdy et al depicts in Figure 1 and 2 and teaches on Column 3, Lines 23-32 and Column 4, Lines 11-25 an image sensing apparatus comprising: image sensing circuit (12) for producing an image signal; and communication circuit (serial data link) for communicating with an external processing apparatus (14), wherein the communication circuit includes a first mode (image transmission mode) for transmitting the image signal in synchronism with a predetermined synchronous signal and a second mode for muting the image signal while communicating with the external processing apparatus in synchronism with the predetermined synchronous signal. Dowdy et al teaches on Column 5, Lines 17-25 that the

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controller (MPU) reads the stored camera information out of the NVS memory through a serial data link. Dowdy et al teaches that in order to prevent any interference with the electrical signals produced by the CCD, the controller reads the information from the NVS memory during the video blanking and vertical retrace times of the CCD. Therefore, the camera produces image signals in accordance with the transmitted drive signals transmitted from the controller (48) and driver (50). Furthermore, the communication circuitry produces a vertical blanking period and vertical retrace in which no image data is being transmitted and allows the camera information stored in the NVS memory to be transmitted during this (muted time). Therefore, the communication circuit mutes the image signal (creates a vertical blanking period or vertical retrace period) while predetermined communication (transmission of NVS data) between the image sensing apparatus (12) and the external image processing apparatus (14) is carried out in synchronism with a predetermined synchronous camera control signal (camera drive signals).

6: In regards to Claim 37, Dowdy et al teaches on Column 5, Lines 23-26 the communications circuit communicates with the external processing apparatus (14) during a periodical image blanking period.

7: As for Claim 38, Dowdy et al teaches on Column 5, Lines 23-26 the communication circuit can communicate with the external processing apparatus (14) during a vertical retrace period in the second mode.

8: In regards to Claim 39, Dowdy et al depicts in Figure 1 and 2 and teaches on Column 3, Lines 23-32 and Column 4, Lines 11-25 an image sensing apparatus comprising: image sensing circuit (18) for producing an image signal; and communications circuit (serial data link) for communicating with an external processing apparatus (14). Dowdy et al teaches on Column 5,

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Lines 17-25 that the controller (MPU) reads the stored camera information out of the NVS memory through a serial data link. Dowdy et al teaches that in order to prevent any interference with the electrical signals produced by the CCD, the controller reads the information from the NVS memory during the video blanking and vertical retrace times of the CCD. Therefore, the camera produces image signals in accordance with the transmitted drive signals transmitted from the controller (48) and driver (50). Furthermore, the communication circuitry produces a vertical blanking period and vertical retrace period in which no image data is being transmitted and allows the camera information stored in the NVS memory to be transmitted during this (muted time). Therefore, the communication circuit mutes the image signal (creates a vertical blanking period or vertical retrace period) while predetermined communication (transmission of NVS data) between the image sensing apparatus (12) and the external image processing apparatus (14) is carried out. The clock signal (60) is viewed by the examiner as a synchronizing signal.

9: As for Claim 40, Dowdy et al teaches on Column 5, Lines 23-26 the communications circuit communicates with the external processing apparatus (14) during a periodical image blanking period.

10: In regards to Claim 41, Dowdy et al teaches on Column 5, Lines 23-26 the communications circuit can communicate with the external processing apparatus (14) during a vertical retrace period.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11: Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,295,082 Dowdy et al in view of USPN 5,486,853 Baxter et al.

12: In regards to Claim 2, Dowdy et al teaches the use of a imaging system in which a remote camera contains memory with information corresponding to the characteristics of the image capturing device. Dowdy et al teaches that this characteristic data is transmitted to a remote ptoessing device so that the image signal can be processed correctly. However, Dowdy et al does not teach that the identification information can include a number of pixels of the image sensing means.

Baxter et al on Column 3, Lines 25-31 a system in which characteristic pertaining to the resolution of an image sensor is transmitted along with the image data to a remote image processing device so that image processing device can perform appropriate digital processing on multiple types of cameras.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the memory of Dowdy to store information related to the imagers resolution as taught by Baxter et al, so that the resolution data can be transmitted to the remote processing device to better allow the remote processing device to control and process the image data output from the remote camera head.

13: As for Claim 7, Dowdy et al teaches the use of an imaging system in which a remote camera head communicates with a remote image processing device. Dowdy et al teaches that the camera-head contains a CCD imager, however, does not give the specifics on the circuitry used to accomplish the image sensing.

Baxter et al depicts in Figure 2 and teaches on Column 2, Lines 25-41 and Column 5, Lines 35-50 that it was advantageous to use timing generator circuits in CCD imaging devices which generate both clock signals and horizontal and vertical synchronizing signals which correspond to the NTSC video signal in order to allow the image sensor to capture images using the NTSC standard.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to drive the image sensor of Dowdy et al using horizontal and vertical synchronizing signals and clock signals which correspond to the NTSC standard so that the image sensor can output a video signal that corresponds to the NTSC standard.

Allowable Subject Matter

14: Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,389,968 Koyanagi et al teaches the use of a CCD television camera with a separate camera head; USPN 5,821,995 Misikawa teaches the use of a method for transmitting multiplexed video signals with camera control signals; USPN 4,539,595 Warner teaches a method for transmitting camera control information in a black burst signal; USPN 5,696,553 teaches the use of a remote video camera which received vertical and horizontal synchronizing signals from a remote camera control unit; USPN 4,926,258 Sasaki et al teaches the use of a solid state imaging device which can control multiple imagers with different characteristics;

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USPN 5,479,206 Ueno et al teaches the use of an imaging system in which the imager is remote from an image processing apparatus; .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hannett whose telephone number is 571-272-7309.

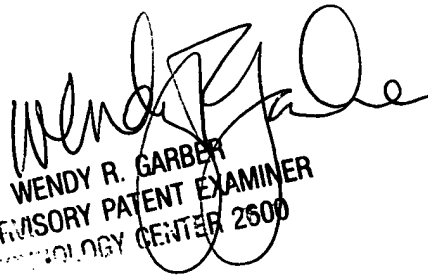
The examiner can normally be reached on 8:00 am to 5:00 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James M. Hannett
Examiner
Art Unit 2612

JMH
5/3/2005


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600